

A NEW ASTEROLECANIID SCALE ON SUCCULENTS FROM MEXICO

(Homoptera; Coccoidea; Asterolecaniidae)

HOWARD L. MCKENZIE

University of California Davis

The discovery of mounted examples of this most unusual scale came quite by accident during a routine search for new California species of mealybugs. Superficially, the new Asterolecaniid resembles certain mealybugs belonging to the genus *Antonina* which, in the adult stage, are characterized by having much reduced antennae, and legs entirely lacking (apodous). Slide preparations of the new scale were found intermixed in a box of indeterminate mealybugs belonging to Stanford University, this material on loan to the University of California at Davis.

It has been the good fortune of the author to have had the aid of Professor G. F. Ferris, one of the world's foremost Coccidologists at Stanford University, not only in working up the technical description of this extraordinary scale, but also in the delineation of the species. To him the author is deeply indebted, and to show his gratitude wishes here to dedicate the species in his honor.

Following the technical description of the genus and species, a revised key to North American genera of Asterolecaniidae is presented.

Sclerosococcus McKenzie, new genus

Genotype.—This genus is here established for the reception of a single species, *Sclerosococcus ferrisi* McKenzie, described as new in this publication.

Recognition characters.—Apparently to be assigned to the family Asterolecaniidae by reason of its possession of geminate (8-shaped) pores. Body of the adult female entirely membranous except for the three terminal segments, which are somewhat sclerotized. Form ovoid, tapering to the posterior end. Legs entirely lacking in the adult female. Antennae present, reduced to a single segment which is deeply invaginated at its apex and bears three or four quite stout setae. Body with, in the cephalic and thoracic regions both dorsally and laterally, a broad band of rather small, circular pores, each of which seems to contain six loculi and which are for the most part arranged in groups of from two to several. Spiracles each with a crescent of similar, but noticeably smaller pores. Interspersed among these pores are a

considerable number of large tubular ducts which terminate at their inner end in a geminate (8-shaped) pore. Between these and the terminal segments of the body is an area which bears dorsally a number of much smaller ducts of a similar type. The fourth to sixth segments from the posterior end of the body bear each a transverse series of quite large circular pores which present a quinquelocular appearance. All pores and ducts present an evident variation in numbers as between opposite sides of the same body in the same individual. Anal opening in a very small ring, hairless and concealed on the dorsal side of the body by the overhanging terminal segment, and on the ventral side by a narrow median sclerotized flap. The sclerotization of the terminal segments of the body extends over the dorsum and around the margin slightly to the ventral side of the body. Embryonic nymphs are contained within some of the available specimens, but none of these are in condition to permit illustration. Antennae six-segmented.

This species seems unmistakably to belong to the family Asterolecaniidae, a family which Ferris (1955) has defined in Atlas of the Scale Insects of North America, Volume VII, pages 8-14. Apparently the most distinctive feature of this family is the common presence of pores of the geminate (8-shaped) type. The new genus, *Sclerosococcus*, differs from any that has been described in the absence of any of the features that are distinctive of other families. It shares with *Mycetococcus* Ferris, a sclerotization of terminal abdominal segments, but is easily differentiated from this and all other Asterolecaniidae by the nature and distribution of its various ducts and pores.

***Sclerosococcus ferrisi* McKenzie, new species**

(Figure 1)

Hosts and distribution.—FROM "SUCCULENTS" FROM MEXICO, TAKEN IN QUARANTINE AT LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA, August 31, 1933, by W. F. Hiltabrand.

Type material.—Type slide (one specimen) and three paratypes will be deposited in the University of California, Department of Entomology and Parasitology, museum collection, Davis, California. Three paratype specimens will be placed in the Stanford University, California, collection, and two paratypes will be sent to the United States National Museum, Washington, D.C.

Habit.—No information.

Recognition characters.—The description of the genus will apply as the description of this species. Length about 1.00 mm.

As previously mentioned, there are no known species of Asterolecaniidae which this new form approaches. At the moment,

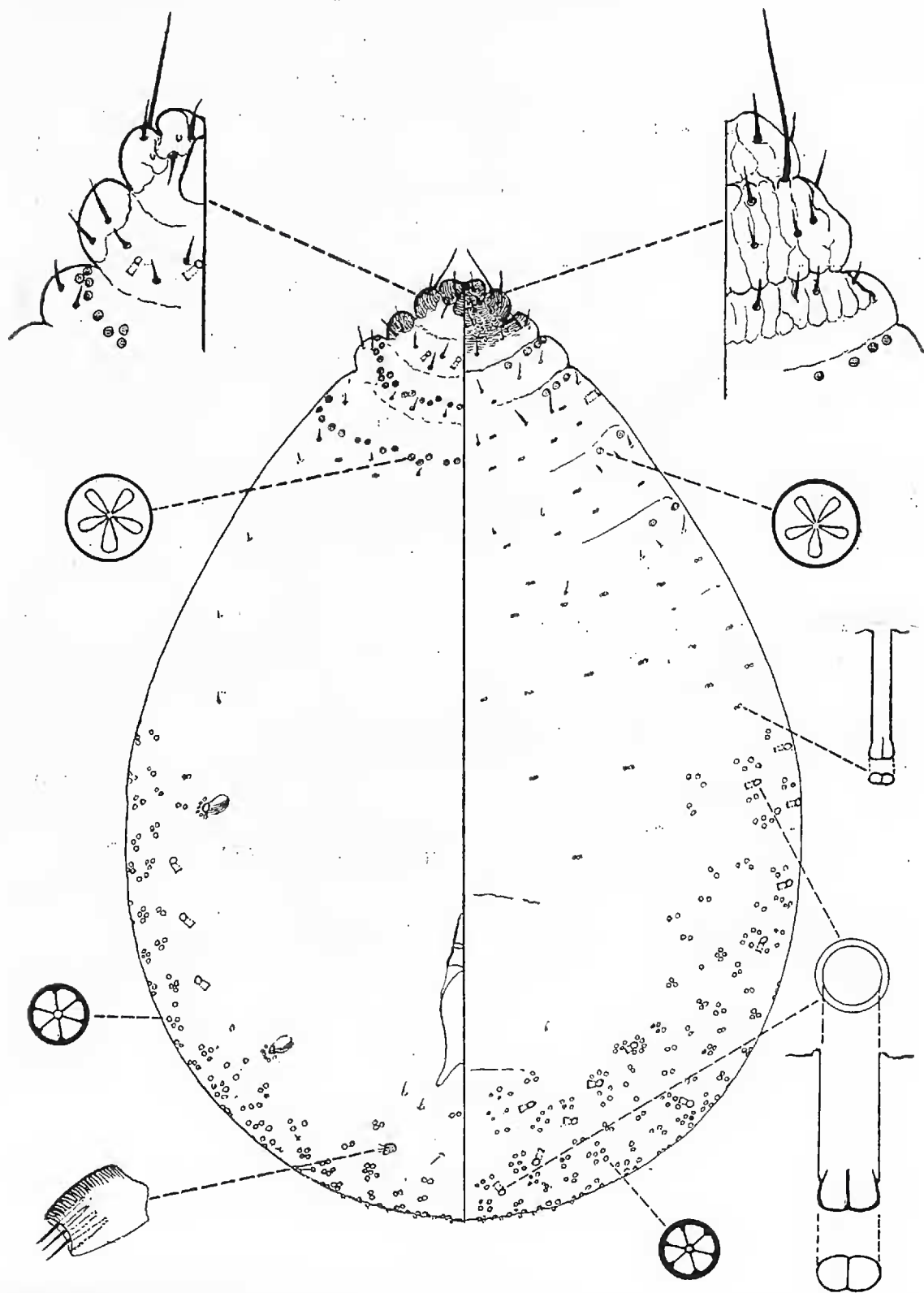


Figure 1.—*Sclerosococcus ferrisi* McKenzie, a new Asterolecaniid scale infesting succulents from Mexico, taken in quarantine at Los Angeles, California.

it appears to stand by itself as a sort of entomological curiosity.

With the addition of the new genus, *Sclerosococcus*, just described, it seems advisable to recast the key to North American genera of Asterolecaniidae as given by Ferris (1955) in his Atlas of the Scale Insects of North America, Volume VII, page 14. The modification of the key is here presented.

KEY TO NORTH AMERICAN GENERA OF ASTEROLECANIIDAE

- | | | |
|------|--|-----------------------|
| 1 | Adult female with the apical lobes and posterior extremity of the abdomen strongly sclerotized..... | 2 |
| | Adult female at times with the anal lobes sclerotic but this never involving the posterior extremity of the body..... | 3 |
| 2(1) | Cephalic and thoracic regions, both dorsally and ventrally, with small, circular six loculi pores; these pores arranged in groups from two to several; circular quinquelocular pores present, both dorsally and ventrally, on fourth to sixth abdominal segments from posterior end..... | <i>Sclerosococcus</i> |
| | Circular six loculi pores lacking anywhere on body; quinquelocular pores not present on abdomen..... | <i>Mycetococcus</i> |
| 3(1) | Adult female with no evidence of anal lobes; with no evidence of pores other than a dorsal circle of quinqueloculars; with a small, dorsal, median, sclerotized plate; occurring as far as known only on palms..... | <i>Mycococcus</i> |
| | Adult female without these characters, with geminate pores..... | 4 |
| 4(3) | Adult female always with a distinct, sclerotized, caudal plate overlying the anal opening..... | <i>Cerococcus</i> |
| | Adult female without a caudal plate..... | 5 |
| 5(4) | Adult female without tubular ducts; with only geminate pores on the dorsum..... | <i>Pollinia</i> |
| | Adult female always with some tubular ducts on dorsum..... | 6 |
| 6(5) | Adult female always with 7-8 segmented antennae, these well developed..... | <i>Lecaniodiaspis</i> |
| | Adult female with the antennae represented by mere tubercles..... | <i>Asterolecanium</i> |

EXACT DATA FOR CERTAIN LOCALITY LABELS USED BY F. E. BLAISDELL

HUGH B. LEECH

California Academy of Sciences, San Francisco

Like many collectors in the same period, it was Dr. Blaisdell's habit in his earlier years to use printed locality labels marked in general terms, such as "Cal." By a series of dots and strokes in red or black ink, he developed a code on these and others to indicate restricted localities. His notebook containing the code